



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,730	10/19/2004	Kansei Iwata	253.44337X00	2574

20457 7590 03/24/2006

ANTONELLI, TERRY, STOUT & KRAUS, LLP  
1300 NORTH SEVENTEENTH STREET  
SUITE 1800  
ARLINGTON, VA 22209-3873

EXAMINER
----------

CHOW, JEFFREY J

ART UNIT	PAPER NUMBER
----------	--------------

2628

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/511,730	<b>Applicant(s)</b> IWATA ET AL.	
	<b>Examiner</b> Jeffrey J. Chow	<b>Art Unit</b> 2628	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 October 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 October 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☒ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

Applicant is advised of possible benefits under 35 U.S.C. 119(a)-(d), wherein an application for patent filed in the United States may be entitled to the benefit of the filing date of a prior application filed in a foreign country.

Should applicant desire to obtain the benefit of foreign priority under 35 U.S.C. 119(a)-(d) prior to declaration of an interference, a translation of the foreign application should be submitted under 37 CFR 1.55 in reply to this action.

### ***Oath/Declaration***

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:  
Visan Daniel's signature is not in the signature line.

### ***Drawings***

## **INFORMATION ON HOW TO EFFECT DRAWING CHANGES**

### **Replacement Drawing Sheets**

Drawing changes must be made by presenting replacement sheets which incorporate the desired changes and which comply with 37 CFR 1.84. An explanation of the changes made must be presented either in the drawing amendments section, or remarks, section of the amendment paper. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). A replacement sheet must include all of the figures appearing on the immediate prior version of the

Art Unit: 2672

sheet, even if only one figure is being amended. The figure or figure number of the amended drawing(s) must not be labeled as "amended." If the changes to the drawing figure(s) are not accepted by the examiner, applicant will be notified of any required corrective action in the next Office action. No further drawing submission will be required, unless applicant is notified.

Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and within the top margin.

### **Annotated Drawing Sheets**

A marked-up copy of any amended drawing figure, including annotations indicating the changes made, may be submitted or required by the examiner. The annotated drawing sheet(s) must be clearly labeled as "Annotated Sheet" and must be presented in the amendment or remarks section that explains the change(s) to the drawings.

### **Timing of Corrections**

Applicant is required to submit acceptable corrected drawings within the time period set in the Office action. See 37 CFR 1.85(a). Failure to take corrective action within the set period will result in ABANDONMENT of the application.

If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings MUST be filed within the THREE MONTH shortened statutory period set for reply in the "Notice of Allowability." Extensions of time may NOT be obtained under the provisions of 37 CFR 1.136 for filing the corrected drawings after the mailing of a Notice of Allowability.

Figures 1 – 3, and 7, based on page 16 of the specification, should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Figure 3 does not show a detailed map of 25m (page 17, lines 8 – 11).

Figure 6 is improper because texts are not totally encapsulated for S3 – S5.

The drawings are objected to under 37 CFR 1.83(a) because they fail to show the division of grid-like sectors into smaller sectors (page 17, lines 8 – 18), how sectors 4 in Figure 4 is

Art Unit: 2672

smaller than the sectors in Figure 3 (page 17, lines 8 – 18), how step 1 is shown in Figure 4 (page 18, lines 2 – 8), topographic map producing system in Figure 4 (page 18, lines 2 – 8), HD 11 in Figure 4 (page 18, lines 2 – 8), connection of each small sector 4 with a straight line (page, 18, lines 17 – 19) as described in the specification and checking function (claim 3). Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

Art Unit: 2672

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it is essentially a repeat of claim 1 and not in narrative form and does not describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details and the abstract is over 150 words long. Correction is required. See MPEP § 608.01(b).

In specifications all mistakes grammatically in the error need must be correct.

Appropriate correction is required.

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Objections***

Claims 4 and 10 – 14 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 4 and 10 – 14 are not been further treated on the merits.

Multiple spelling and grammatical errors must be fixed in the claims.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 – 15 are rejected under 35 U.S.C. 112, second paragraph for being indefinite because it is uncertain for one of ordinary skill in the art to know what algorithm having a rationality is. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. “An algorithm having rationality” is stated in page 18, lines 23 and 24, but it is difficult for one of ordinary skill in the art to ascertain what kind of algorithm this “algorithm having rationality” is.

Claims 1 – 15 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The interpolation between discontinuous portions is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The interpolation between

Art Unit: 2672

discontinuous portions has been explained in broad and general terms in basic algebraic methods for these algebraic methods does not provide adequate information on how the interpolation between discontinuous portions are done (page 19 – 22), but detailed explanations are necessary for one of ordinary skill in art to be able to produce the applicant system (page 22, lines 1 – 3).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 - 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 2, the word "means" is preceded by the word(s) "display" in an attempt to use a "means" clause to recite a claim element as a means for performing a specified function. However, since no function is specified by the word(s) preceding "means," it is impossible to determine the equivalents of the element, as required by 35 U.S.C. 112, sixth paragraph. See *Ex parte Klumb*, 159 USPQ 694 (Bd. App. 1967).

Regarding claim 2, the word "means" is preceded by the word(s) "recording" in an attempt to use a "means" clause to recite a claim element as a means for performing a specified function. However, since no function is specified by the word(s) preceding "means," it is impossible to determine the equivalents of the element, as required by 35 U.S.C. 112, sixth paragraph. See *Ex parte Klumb*, 159 USPQ 694 (Bd. App. 1967).

Claim 5 recites the limitation "third topographic map" in line 4. There is insufficient antecedent basis for this limitation in the claim. It is impossible for one of ordinary skill in the



Art Unit: 2672

art to figure out what is a third topographic map, how a third topographic map is made, what a third topographic map is used for, and how a third topographic map relates to the user map elements.

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, because the phrase “so that the lines of segments come cross with each other, when producing said first topographic map, by connecting said small sectors having the same sea level, sequentially” makes no sense.

The term "thereof" and “the like” in claims 2, 5, and 6 are relative terms which renders the claim indefinite. The terms are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Claims 2, 5, and 6 make claims 3, 4, and 7 – 14 indefinite.

Claims 1, 6, and 15 are rejected under 35 U.S.C. 112, second paragraph, for being indefinite because it is uncertain for one of ordinary skill in the art to know what algorithm having a rationality is.

Claims 1, 6, and 15 are rejected under 35 U.S.C. 112, second paragraph, for being indefinite and unclear because of the phrase “interpolating discontinuous data being in short between each sectors” is difficult for one of ordinary skill in the art to understand what “in short” is.

Claim 15 is rejected under 35 U.S.C. 112, second paragraph, because it is confusing and indefinite. Claim 15 recites “reading sea levels from digital data of the digital topographic map, so as to be aligned on a plane to be blocked”. It is difficult for one of ordinary skill in the art to

Art Unit: 2672

ascertain what is being blocked and how is this something being blocked or the relevance of being blocked relates to the topographic map and/or a plane.

Claim 9 is rejected under 35 U.S.C 112, second paragraph, because “and/or” is indefinite.

Claim 5 is rejected to because the preamble states a producing of a digital topographic map. It is uncertain if that the second topographical map is being produced in claim 1 or the third topographical map is being produced in claim 5 is the digital topographic map.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 – 3, 6, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yura (JP 06-067605) in view of Christensen (US 5,333,248).

Regarding independent claim 1, the Universe Transverse Mercator (UTM) projection is notoriously well known in the art. The UTM projection is based on the ideas of Carl Gauss (1777- 1855) called the Gauss projection (nte-serveur.univ-lyon1.fr). The UTM projection evolved from the Transverse Mercator projection, which was evolved from the Mercator projection. To explain the basic ideas of the UTM projection, looking at the figure from nte-serveur.univ-lyon1.fr, imagine a cylinder that encloses the world where the axis of the cylinder runs through the north and south pole of the world. Next, imagine a light source in the center of

Art Unit: 2672

the world where the light that passes through the world gets mapped to the cylinder and then unfolding the cylinder ([www.paddles.com](http://www.paddles.com)). This creates a projection of the world on a flat paper. The UTM projection can also be accomplished by taking narrow strips of the spherical world and laying it out on paper ([plantsci.sdstate.edu](http://plantsci.sdstate.edu) and Figure 9). These strip pieces have irregular quadrilaterals that are set at predetermined distances of usually 6 degrees apart ([plantsci.sdstate.edu](http://plantsci.sdstate.edu) and Figure 9), which reads on the claimed basic map that is produced through UTM drawing method, into grid-like sectors at a predetermined distance. The strip can be viewed as a sector where the irregular quadrilaterals that are divided by 6 degrees of separation are small sectors ([plantsci.sdstate.edu](http://plantsci.sdstate.edu) and Figure 9), which read on the claimed basic map being divided into smaller sectors. Since the strips used by the UTM projection is like peeling strips from an orange and flattening it produce discontinuous sectors, which read on the claimed small sectors that are produced while interpolating discontinuous data being in short between each sectors and within each of the sectors. Ultimately, the ideal situation to draw a flat map would be using the earlier method provided by [www.paddles.com](http://www.paddles.com). Unfortunately, it is impossible to shine a light in the middle of the earth and map it out to a cylinder in outer space. Data are generally obtained from an aerial position within a certain distance in altitude or from the ground measuring elevation. But to map the world onto a flat surface, a translation of data obtained from a spherical surface to a flat surface without discontinuity must be made. That is what the basic UTM method provides. Examiner will note that the described information hereinabove is not part of the 35 U.S.C. 103 rejection but provides a tutorial and a basic understanding of what a basic UTM drawing method that is well known in the art. Yura discloses a basic map of the earth that is produced through UTM, where the basic map of the

earth is divided into grid-like sectors 502 where these grid-like sectors are divided into smaller segments as shown in reference character 505 (paragraphs 28 – 30 and Figure 5), which reads on the 2<sup>nd</sup> paragraph of claim 1. Yura discloses information are taken in by  $x$ , and  $(y, h)$  as the position coordinate where  $h$  is the height at the  $x$  and  $y$  coordinates (paragraph 8), which reads on the claimed digital data that is produced by relating  $x$ ,  $y$  coordinates of the small sector obtained and a sea level obtained through measurement. It is inherent that Yura's system connects points with the same altitude or the same height above the sea level, just like contour lines on topography maps are connected by points that have the same altitude or the same height above the sea level (Figure 1), which reads on the 3<sup>rd</sup> paragraph of claim 1. Yura did not explicitly disclose a smoothing process of the obtained data points, but Yura does disclose a smooth topographical map (Figure 1). Christensen discloses a smooth process of topographical map by smoothing data forming a triangle into curve contour lines (Abstract). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yura's system with Christensen's teachings of smoothing linear segments within a triangular mesh to produce a smooth topographic map, which gives topographical map a more realistic visual presentation instead of a blocky digital visual presentation.

Regarding dependent claim 2, Yura discloses a topography map being displayed as a single layer and a layer structure that is 3-D (Figure 1), which reads on the claimed data being displayed on a display means. It is inherent that Yura's system  $x$ , and  $(y, h)$  coordinates are map element data and it is also inherent that Yura's system store information in a computer readable medium as his invention relates to a computer that displays topographic maps.

Regarding multiple dependent claim 3, Christensen discloses a checking of a user specified minimum angle where a triangle is flagged if the triangle is unsuitable for smoothing and where the flagged triangle avoids contours intersecting, which reads on the claimed checking function is provided for checking on whether the mathematical process is conducted, appropriately or not, so that the lines of segments come cross with each other, when producing said first topographic map, by connecting said small sectors having the same sea level, sequentially.

Regarding independent claim 6, Yura discloses a basic map of the earth that is produced through UTM, where the basic map of the earth is divided into grid-like sectors 502 where these grid-like sectors are divided into smaller segments as shown in reference character 505 (paragraphs 28 – 30 and Figure 5), which reads on the 2<sup>nd</sup> paragraph of claim 6. Yura discloses information are taken in by x, and (y, h) as the position coordinate where h is the height at the x and y coordinates (paragraph 8), which reads on the claimed digital data that is produced by relating x, y coordinates of the small sector obtained and a sea level obtained through measurement. It is inherent that Yura's system connects points with the same altitude or the same height above the sea level, just like contour lines on topography maps are connected by points that have the same altitude or the same height above the sea level (Figure 1), which reads on the 3<sup>rd</sup> paragraph of claim 6. Yura discloses a topography map that is not discontinuous (figure 1), where it is inherent that right angle quadrilaterals that are combined together are not discontinuous and that it is inherent that Yura's system translate a discontinuous topography map to a continuous topography map because Yura discloses a discontinuous topography map (Figure 5) and a non-discontinuous topography map (Figure 1) where the non-discontinuous topography

map (Figure 1) is the final product, which reads on the claimed 5<sup>th</sup> paragraph of claim 6. Yura discloses the topography map being displayed into a single 2-D layer or a multiple 3-D layer (Figure 1), which reads on the claimed 6<sup>th</sup> paragraph of claim 6. Yura did not explicitly disclose a smoothing process of the obtained data points, but Yura does disclose a smooth topographical map (Figure 1). Christensen discloses a smooth process of topographical map by smoothing data forming a triangle into curve contour lines (Abstract). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yura's system with Christensen's teachings of smoothing linear segments within a triangular mesh to produce a smooth topographic map, which gives topographical map a more realistic visual presentation instead of a blocky digital visual presentation.

Regarding independent claim 15, Yura discloses a basic map of the earth that is produced through UTM, where the basic map of the earth is divided into grid-like sectors 502 where these grid-like sectors are divided into smaller segments as shown in reference character 505 (paragraphs 28 – 30 and Figure 5) and where information is stored as vector-like data where the information is represented by x, and (y, h) as the position coordinate where h is the height at the x and y coordinates (paragraph 8), which reads on the 2<sup>nd</sup> paragraph of claim 1 except the claimed mesh-like data being produced. It is inherent that Yura's system connects points with the same altitude or the same height above the sea level without intersecting these contour lines in any fashion, just like contour lines on topography maps are connected by points that have the same altitude or the same height above the sea level (Figure 1), which reads on the 3<sup>rd</sup> paragraph of claim 1. Yura discloses a topography map that is not discontinuous (figure 1), where it is inherent that right angle quadrilaterals that are combined together are not discontinuous and that

Art Unit: 2672

it is inherent that Yura's system translate a discontinuous topography map to a continuous topography map because Yura discloses a discontinuous topography map (Figure 5) and a non-discontinuous topography map (Figure 1) where the non-discontinuous topography map (Figure 1) is the final product, which reads on the claimed 5<sup>th</sup> paragraph of claim 6. Yura discloses the topography map being displayed into a single 2-D layer or a multiple 3-D layer (Figure 1), which reads on the claimed 6<sup>th</sup> paragraph and the claimed 7<sup>th</sup> paragraph of claim 6. Yura did not explicitly disclose a smoothing process of the obtained data points, but Yura does disclose a smooth topographical map (Figure 1). Yura did not explicitly disclose a mesh-like data structure, but Yura's system does take in data points and perform functions on these data points to produce a topographical map (Figure 1). Christensen discloses a smooth process of topographical map by smoothing data forming linear lines in a triangular mesh representation into curve contour lines (Abstract). Christensen discloses a value that varies how smooth the curved contour line is (column 9, lines 26 – 37 and Figure 9), which reads on the claimed differential coefficients. It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yura's system with Christensen's teachings of smoothing linear segments within a triangular mesh to produce a smooth topographic map, which gives topographical map a more realistic visual presentation instead of a blocky digital visual presentation.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yura (JP 06-067605) in view of Christensen (US 5,333,248) and Yanker (5,249,263)

Regarding dependent claim 7, Yura did not disclose the control of colors for coloring the topography map. Yanker discloses tools that of a slide bar that controls the selected color by the

Art Unit: 2672

user (Figure 4). Yanker also discloses an image editor that pull up a color palette display 12 that overlays the image 14 on the screen and enables the image to be edited for color (column 3, lines 26 – 33). It would have been obvious for one of ordinary skill in the art to modify Yura's system with Yanker's teachings of color editing an image to have colors representing certain sea levels on a topography map that is user customizable, which gives users a better visualization of how high or low a certain place is by using color mapping to a certain altitude (for example the images from [www.myfolsom.com](http://www.myfolsom.com) and [earth.leeds.ac.uk](http://earth.leeds.ac.uk)) instead of finding the numerical number on a topography map and tracing the line back to the desired spot in determining the altitude.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yura (JP 06-067605) in view of Christensen (US 5,333,248) and Yanker (5,249,263) and Hale (5,961,573).

Regarding dependent claim 8, Yura did not disclose the control of colors for coloring the topography map. Yura also did not disclose a color legend. Yanker discloses tools that of a slide bar that controls the selected color by the user (Figure 4). Yanker also discloses an image editor that pull up a color palette display 12 that overlays the image 14 on the screen and enables the image to be edited for color (column 3, lines 26 – 33). Hale discloses a color legend for certain height range (Figure 4). It would have been obvious for one of ordinary skill in the art to modify Yura's system with Yanker's teachings of color editing an image and Hale's teaching of representing height of a topography map with color and providing a legend to have colors representing certain sea levels on a topography map that is user customizable and having a legend that maps height to a certain color, which gives users a better visualization of how high or



Art Unit: 2672

low a certain place is by using color mapping to a certain altitude and using a legend for a quick reference (for example the images from [www.myfolsom.com](http://www.myfolsom.com) and [earth.leeds.ac.uk](http://earth.leeds.ac.uk)) instead of finding the numerical number on a topography map and tracing the line back to the desired spot in determining the altitude.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yura (JP 06-067605) in view of Christensen (US 5,333,248) and Yanker (5,249,263) and Hale (5,961,573) and Koyanagi (5,884,217).

Regarding multiple claim 9 in any of its combination, Yura did not disclose a sub screen that displays the same content of the topography map that is displayed on the main screen. Yura did not explicitly disclose the maps being designated by a name and/or number. Koyanagi discloses a sub-screen that displays the same information type as the main screen (Figure 6). Koyanagi also discloses sectors of the map being represented by numbers (Figure 11). It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Yura's system with Koyanagi's teachings of displaying maps and storing maps with any combination of Hale's teachings and Yanker's teachings to display a main screen and a sub screen of the same map type, which gives users a zoomed in portion of the desired area and a different "angle" of viewing the topography map, and to designate maps by numbers, which is one of the efficient ways to name and store maps in a computer system for quick access and reference to the desired maps to be displayed and to be able to display the desired maps in a quick manner.


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey J. Chow whose telephone number is (571)272-8078. The examiner can normally be reached on Monday - Friday 10:00AM - 5:00PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on (571)-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JJC

  
ULKA CHAUHAN  
SUPERVISORY PATENT EXAMINER